



KITCHENER-WATERLOO SECTION

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The Kitchener-Waterloo Section of the Institute of Electrical and Electronics Engineers serves members whose mailing address is in Bruce, Grey, Perth, Waterloo or Wellington counties. It collects news relevant to local engineers and is published monthly.

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<http://kw.ieee.ca>

IEEE KW Section, c/o Electrical & Computer Engineering (EIT 3028)

University of Waterloo

Waterloo, ON, N2L 3G1

KW Section Executives

<http://www.ieeekw.com/executive.php>

Officers :

Chair	Dr. Shahab Ardalan
Vice-chair	Dr. Amin Mobasher
Secretary	Vacant
Treasurer	Dr. Amir Khatibzadeh

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Professional & Publicity Activities	Vacant
Student Activities (Conestoga College)	Ms. Jane Carr
Student Activities (University of Guelph)	Vacant
Student Activities (University of Waterloo)	Dr. Siva Sivoththaman
Educational Activities	Dr. Magdy Salama
Newsletter Editor	Mr. Jameson Hyde
Nominations	Dr. Mauro Rossi
Awards	Dr. Alaa Khamis

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GOLD (Graduates of the Last Decade)	Vacant
WIE (Women In Engineering)	Dr. Ladan Tahvildari
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LM (Life Members)	Vacant

Student Branches :

Conestoga College Student Branch	Mr. Justin Swance
University of Guelph Student Branch	Vacant
University of Waterloo Student Branch - Stream A	Mr. Haosen Cai
University of Waterloo Student Branch - Stream B	Ms. Joanna Ma

Vacant Positions

The IEEE Kitchener-Waterloo Section is looking for interested volunteers to fill a number of available positions on the board. Anyone interested should contact one of the executive for further details.

<http://www.ieeekw.com/executive.php>

Upcoming Events

Updated information can be found at <http://www.ieeekw.com/activities.php>.

EPTECH Hi-Tech Electronics Show

April 7, 2011
Thornhill, ON

EPTECH regional professional electronics shows are produced in major high-technology centers across Canada.

EPTECH is the only series of coast-to-coast national electronics shows in Canada. The series is sponsored by EP&T, Canada's largest professional electronics trade publication, and is produced by Business Information Group, a leading technology and information provider.

Employing a highly time-efficient table-top display format, EPTECH shows target electronics designers, engineers, technicians, technologists, purchasers, technical managers and researchers.

EPTECH exhibitors cover a very broad spectrum within the electronics industry, displaying such products as semiconductors and ICs; passive and electromechanical components; test equipment and electronic instrumentation; connectors; design, test and technical software; technical computer systems and products; design, testing and contract manufacturing services; electronic chemicals and materials production equipment; and industrial electronics products.

<http://www.ept.ca/eptech/>

Solar Panel Installation for Feed-In Tariff

April 14, 2011, 6:00 PM
Speaker: Mike Triska, Direct Current
Hamilton, ON

Generating Electricity with Photovoltaic Cells and Connecting to the Grid.

An introduction on the technology of, and how to sell clean, green, renewable power back to the grid. The Laidlaw United Church has recently installed a solar panel system under the Government of Ontario's "Green Initiatives" Feed-In-Tariff program. The meeting includes a tour of the completed installation, an opportunity to learn about the process of solar installation from start to finish, and a look at their payments from Horizon Utilities for solar power generated.

http://meetings.vtools.ieee.org/meeting_view/list_meeting/4767

IEEE's Teacher In-Service Program Training Workshop

April 28 – 29, 2011
Mississauga, ON

The purpose of this workshop is to help IEEE members improve the teaching of engineering and engineering design in pre-university schools (primary schools, middle schools and high schools). In this workshop, IEEE members will learn how to work with teachers of pre-university schools, and how to conduct hands-on sessions for these teachers on engineering topics. The teachers will then use these sessions on a regular basis with their own students.

The expectation is that IEEE members who complete the workshop will contact local schools in the future, and work with their teachers on lesson plans that demonstrate engineering and engineering design. Examples of lesson plans are available at <http://www.tryengineering.org/lesson.php>.

The workshop is held for one and a half days, and it provides attendees with examples of lesson plans, suggestions on the best way to contact and work with the pre-university school system, and description of successful management of a TISP program in an IEEE Section. The event is free of charge for all IEEE members and invited educators. IEEE will reimburse all reasonable travel-related expenses for this workshop.

Travel-related expenses include up to a one night hotel stay and transportation to and from the workshop location.

http://www.ewh.ieee.org/reg/7/TISP_R7_Flyer.pdf

1st IEEE Canada Women in Engineering National Conference

April 30, 2011
Mississauga, ON

Symposium on Future Friendly Technologies

The Women in Engineering National Conference (WIENC) provides researchers, students, and practicing professionals in diverse range of engineering, science and technology with a valuable opportunity to network, exchange ideas, strengthen existing partnerships and foster new collaborations.

WIENC 2011 will feature papers presented from a broad range of engineering, science and technology with the focus on future friendly technologies. There will be multitude of guest speakers from senior executives in industry and academia, roundtable discussions, workshop, poster presentations, best poster award, and industrial exhibitions.

You are invited to participate in WIENC 2011 by submitting a one page abstract in one of the specified areas. Both male and female delegates are encouraged to participate. The deadline to receive the abstracts is Sunday, February 20, 2011. For more information please refer to Submission Guideline.

<http://www.ieee.ca/wie/wienc11/>

10th International Conference for Upcoming Engineers

May 5, 2011

Ryerson University, Toronto, ON

The International Conference for Upcoming Engineers (ICUE) was initiated by members of Ryerson University in 2001 to explore different options after graduation and to network with successful professionals in various engineering fields. To benefit upcoming engineers from a wide range of locations, the conference has been hosted by different universities each year. This year IEEE student branch at Ryerson University is proud to be hosting the ICUE conference for the third time.

ICUE has been developed as an International Conference to provide young engineers with the opportunity to expand their understanding of both academic and industrial sections of their field, and to present students with the opportunity to express their technical knowledge in public.

ICUE 2011 will feature industrial speakers, academic speakers, panel discussions, short course, design projects demonstrations, and social gatherings. This one day conference will focus on emerging technologies in all areas of engineering design and innovations. On behalf of the ICUE 2011 organizing committee, we are delighted to invite you to join us on May 5, 2011 at Ryerson University for the 10th annual International Conference for Upcoming Engineers.

<http://www.rnet.ryerson.ca/icue2011/>

Canadian Conference on Electrical and Computer Engineering – Technology Driving Innovation

May 8 – 11, 2011

Niagara Falls, ON

CCECE provides researchers, students, and practicing professionals in the area of Electrical and Computer Engineering with a Canadian venue in which they can present the latest technological advancements and discoveries. It is also a valuable opportunity to network, exchange ideas, strengthen existing partnerships and foster new collaborations. CCECE 2011 will feature mini-symposia with papers presented from a broad range of areas in Electrical and Computer Engineering. There will be tutorial sessions in leading topics, plenary talks from senior executives in industry and academia, special sessions in hot topics, social programs, the IEEE Canada Awards and Banquet night, best student paper awards luncheon, and industrial exhibitions.

This conference, organized by local IEEE sections, provides a forum for Canada's best emerging Engineering talent and industrial leaders to present, participate, sponsor and network between partners in Canada's High Technology Frontier.

http://www.ieee.ca/ccece11/index_en.php

2nd International Workshop on Real-Time Measurement, Instrumentation and Control

June 2 – 3, 2011

University of Ontario Institute of Technology, Oshawa, ON

Speakers:

Computer-aided Safety Engineering

Professor Paul Chung

Associate Dean (Research), Faculty of Science &

Director, Research School of Informatics,

Loughborough University, UK

Dynamic Analysis and Monitoring of Process Control Loops

Professor Yoshiyuki Yamashita

Department Chair Department of Chemical Engineering Tokyo University of Agriculture and Technology, Tokyo, Japan

Topics:

The workshop will have papers in the area of real-time measurement, instrumentation and control, which include (but not limited to) the following topics:

- Real time measurement techniques
- Advanced energy systems
- Oil & gas process systems
- Advanced risk and reliability engineering
- Advanced safety design
- Advanced instrumentation technologies
- Control system design and analysis
- Applications on radiation detection & protection
- Nuclear reactor internal and external measurements
- Advanced nuclear power systems
- Advanced plant inspection & maintenance
- Real time monitoring & diagnosis
- Applications on health physics
- Applications on space

http://ewh.ieee.org/conf/rtmic/2011/#_Venue

21st International Conference on Noise and Fluctuations

June 12 – 16, 2011

Toronto, ON

The International Conference on Noise and Fluctuations (ICNF) is a biennial event, with the aim of bringing together specialists in fluctuation phenomena from different fields in science and engineering, to address both fundamental and applied issues. Recent past conferences in this series were organized in St. Louis (1993), Palanga (1995), Leuven (1997), Hong Kong (1999), Gainesville (2001), Prague (2003), Salamanca (2005), Tokyo (2007), and Italy (2009).

For queries about ICNF 2011 you can use the e-mail address

icnf2011@icnf2011.org

International Conference on Autonomous and Intelligent Systems

June 22 – 24, 2011
Burnaby, BC

The 2nd International Conference on Autonomous and Intelligent Systems (AIS 2011) is held in conjunction with the 8th International Conference on Image Analysis and Recognition in the beautiful city of Burnaby on the outskirts of Vancouver, Canada. It aims at providing a platform for researchers, engineers, academics and industrial professionals to present their recent research work and to explore future trends in various areas of autonomous and intelligent systems. The conference will address recent advances in theory, methodologies and applications in the field.

The scientific program will include keynote and invited speakers and fully refereed contributions. The organizers are working with Springer to have the proceedings published as a special volume in Springer Lecture Notes in Computer Science Series. It will be also indexed in major indexing sites. As with the first edition of AIS, selected articles will be published in the International Journal of Robotics and Automation and The International Journal on Control and Intelligent Systems, among other journals. AIS 2011 is technically co-sponsored by the IEEE.

<http://www.ais.uwaterloo.ca/ais11/>

IEEE UW Guest Speakers

IEEE UW Student Branch

Keep an eye on the IEEE UW Student Branch website for further details on two very exciting guest speakers that will be visiting in the fall.

Canadian astronaut, Dr. Robert Thirsk will be sharing his experiences with the American and Russian space programs and his recent involvement on the International Space Station.

A representative from Blizzard Entertainment will be returning to Waterloo for the second year to talk about products and career opportunities.

http://ieee-sb.uwaterloo.ca/upcoming_events.aspx

Recent Events

Engineering Student Projects Go on Show

March 21, 2011
University of Waterloo News Bulletin

Upper-year undergraduate students in six Waterloo engineering programs displayed their innovative design projects, including a prototype device that can control your MP3 player with just a squeeze of an arm muscle.

At Engineering Design Symposium Week, nearly 700 senior engineering students presented more than 150 design projects, posters and prototypes to the public, industry guests, alumni and the academic community.

"Engineering Design Symposium Week is a tremendous opportunity to view first-hand the work of our talented engineering students as they near graduation," said Adel Sedra, dean of Waterloo Engineering. "The inventive design projects on display represent months of hard work and effort by our students."

Among the projects was the Portable Media Player Control Using EMG Signal from Arm Muscles, devised by systems design engineering students Jae Yoon Kim, Eric Lim, and Min Chol Kweon. They said their invention uses electromyography: "a portable music player such as a MP3 player can be controlled without needing any physical interactions with the device's screen. This is especially useful when the users need to minimize unnecessary arm movements."



Portable Media Player Control

Engineers and the World

Grad Students Recognized for Exceptional Teaching

March 30, 2011

University of Waterloo ECE News

Three of the four students announced as winners of this year's Amit and Meena Chakma Award for Exceptional Teaching by a Student are from engineering. The engineering students to be honoured at spring convocation are Justin Eichel, a systems design engineering grad student, and Adam Neale and Mehrdad Pirnia, who are both electrical and computer engineering grad students.

For Fun...

Brain Teaser

Joe McCrea (Logain), The Grey Labyrinth

When I fell asleep last night I had the weirdest dream, where not everything was as it seemed. I was playing in a strange Olympic biathlon with some pretty formidable opponents. The gods and I competed in two events; one was a regular foot race, while the other was a game of basketball. Don't ask why, the dream was strange to begin with.

Well, my memory is fading fast, but from what I remember, Coelus managed to outrun Hades, while Zeus lost to Aphrodite. Hermes obviously won, since he has

those winged shoes of his. Somehow I outraced Poseidon who lost to Cronos. Ares topped Zeus but not me.

In basketball, Aphrodite turned up only air-balls and scored a big goose egg. I scored more than Hermes, but tied Hades. Ares doubled my score. Cronos was nearly unstoppable and we lost track of his score since he had the lead. Zeus came in second, just 7 points more than Coelus. Coelus scored three times as many points as the place he came in during the foot race. Poseidon beat me by 7 points. What did Ares score and what place did he come in during the race?

Engineering Humour

A TCP packet walks into a bar and says, "I'd like a beer."
The bartender replies, "You want a beer?"
The TCP packet replies, "Yes, I'd like a beer."

A UDP packet walks into a bar.
The bartender says "Hello, what can I get you".
The UDP packet doesn't acknowledge.

A Broadcast packet walks into a bar, screams to the bartender, "HEY MAC! I WANT A BEER!"
Everyone else in the bar hears him but chooses to ignore him.

IPv4 walks into a bar.
The bartender asks, "What'll it be?"
IPv4 responds, "A strong CIDR please. I'm exhausted."